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# PROJECT WORK

## Analysis of elements and development of a production cyber-physical system

### Scenario

You are responsible for the development of a control system for an automated production line purchased by a large customer. The line provides automation of the technological process at the customer's enterprise. The line consists of standard modules, but partially modernized and supplemented with modules. The line is delivered to the customer as soon as you complete the job. There will be no opportunity to make changes later.



### Task

Analyse the presented elements of the cyber-physical system and develop/evaluate the components and tasks for control the system according to the diagrams and drawings presented in the assignment. The line can receive three types of workpieces (red, silver, black) in two positions (hole up or down). You can use any software. To solve the task you need:

- To analyse of the cyber-physical system using advanced technologies combined in the Industry 4.0 concept
- To develop a diagram of the production process
- To determine the parameters of the products that require control
- To develop a scenario of interaction and a diagram of synchronisation of all stations and modules of the automated line
- To propose a concept and present the functional and structural diagrams of the MES system, including cloud storage and other elements of Industry 4.0 digital technology